| AMENDMENT OF SOLICIT | TATION/M | ODIFICATIO | N OF CONTR | RACT | 1. Contract II |) Code | Page 1 | of Pages |
|--|--|---|---|--------------------------------|--|---|---------------------------------|-------------------------------------|
| 2. Amendment/Modification No. | 3. E | Effective Date | 4. Requisition/Puro | chase Re | eq. No. | 5. Project N | lo. (if appli | |
| Amendment 0002 | MA | R 10, 2005 | NAAX1000-5-00002 | | | | | |
| 6. Issued By NOAA's HIGH PERFORMANCE C OFFICE 1315 EAST WEST HIGHWAY, ROO SILVER SPRING, MD 20190 | OMPUTING | OFA61312 ACQUISITION | 7. Administered By | (If other | than Item 6) | C | Code | |
| | | | | I I | | | | |
| 8. Name and Address of Contractor (No., | , Street, County | , and Zip Code) | | | A. Amendment of G133A-05-RF | | No. | |
| TO ALL INTERESTED PARTIES | | | | l — | B. Date (See Ite | | | |
| | | | | | n 13, 2005 | , | | |
| | | | | 10 | A. Modification | of Contract/O | rder No. | |
| | | 10B. Date (See | | | Item 13) | | | |
| Code | Facili | ty Code | | | | | | |
| | | • | O AMENDMENTS O | F SOLIC | CITATIONS | | | |
| submitted; or (c) By separate letter or telegoment TO BE RECEIVED AT THE PLACE IN REJECTION OF YOUR OFFER. If by voletter, provided each telegram or letter male | gram which included by the properties of this amount of the properties of the proper | udes a reference to FOR THE RECEIP endment you desire | PT OF OFFERS PRICE to change an offer a | mendme DR TO T Iready su | ent numbers. FA HE HOUR AND ubmitted, such c | ILURE OF YC DATE SPECI hange may be | OUR ACKN FIED MAY made by | IOWLEDG- / RESULT telegram or |
| 12. Accounting and Appropriation Data (iii | f required) | | | | | | | |
| 13. | | | MODIFICATIONS OF | | | | | |
| (x) A. This change order is issued pursu | | | | | | ntract Order N | o. in item ' | 10A. |
| B. The above numbered Contract/Or | | | istrative changes (su | ıch as cl | hanges in paying | g office, approp | oriation da | te, etc.) |
| Set fourth item 14, pursuant to the C. This supplemental agreement is e | | | : | | | | | |
| D. Other (Specify type of modification | n and authority | <u> </u> | | | | | | |
| D. Other (Specify type of modification | n and admonly) | , | | | | | | |
| E. IMPORTANT: Contractor is not | | ed to sign this docu | | | es to the issuing | | | |
| 14. Description of Amendment/Modification | (Organized by | UCF section heading | ngs, including solicita | tion/con | tract subject ma | tter where feas | sible.) | |
| 1. The purpose of this Amendment is t | o revise the S | olicitation as follo | ows: | | | | | |
| SECTION B | | | | | | | | |
| LOT II, OPTION V CLIN 0009A is co Section C.9.3, Statement of Need, for a revised Page B-3. | | | | | | | | |
| Except as provided herein, all terms and condition | | ent referenced in item 9 | 1 | | | | | ct. |
| 15A. Name and Title of Signer (Type or F | rint) | | 16A. Name a | ind title c | of Contracting Of | ticer (<i>Type or</i> | r Print) | |
| 15B. Contractor/Offeror | | 15C. Date Signed | 16B. United S | States of | America | | 16C. F | Date Signed |
| | | | | | | | | J |
| (Signature of person authorized to | o sign) | | (Signa | ature of | Contracting Office | cer) | | |

NOTE F – the interest rate cited in the second paragraph is changed from 4.4% to 3.9%. Page B-6 should be removed and replaced with the revised Page B-6.

SECTION C

The following is a summary of the revisions to Section C. Because of the number of changes, a revised Section C, in its entirety is attached to this Amendment and supersedes Section C in the RFP. The changes to the attached revised Section C have been highlighted in blue.

- C.4.3 seventh sentence of first paragraph is changed to read: "The Government requires 6% of the **cumulative annual "Total" funding amount (the far right-hand column) cited in Table I below** be reserved."
- C.5.1.2 Throughout this section, "development" has been changed to "interactive."
- C.5.1.2 last sentence of last paragraph has been changed to read: "Early access **to initial system delivery and subsequent system upgrades** (with some Contractor provided engineering assistance) up to 6 to 9 months in advance of delivery is desirable."
- C.5.1.3 last sentence has been changed to read: "The Contractor shall provide resources that can efficiently execute both types of codes, with the goal of minimizing the execution time of each workstream and maximizing the overall throughput when the workstreams **targeted for that subsystem** are run concurrently."
- C.5.2.4 last sentence of fourth paragraph and last sentence of sixth paragraph are changed to read: "The Government desires a transparent migration of this legacy archive to the new HSMS, maintaining the present filesystem image. The Contractor shall make arrangements to keep this data available during the transition, potentially at a reduced level of performance."
- C.5.2.4 second sentence of the ninth paragraph is changed to read: ". Initially, per Subsystem, the HSMS shall be able to support **200** million files and individual files that are up to **1 TB** in size."
- C.5.2.4 last sentence of 11th paragraph is changed to read: "The "average search time" must apply to the method the HSMS software uses to position files."
- C.5.2.5 first paragraph is changed to read: "The exchange of information to and from the NOAA Operations HPC is an integral part of NOAA's overall Research, Development and Operations processes; an objective of this procurement is to preserve **and enhance** the ability to execute such exchange of information."
- C.5.2.6.3 Table IIa has been revised to include data for FY2005, FY2006, FY2012, FY2013, and FY2014.
- C.5.2.8 next to last paragraph, last sentence has been changed to read: "It shall be possible to restore files from these backups until **the end** of the file systems for which the backups are made."
- C.5.4.1.1 the following sentence is added to the paragraph: "The Government does not now expect significant growth in the number of simultaneous users."
- C.5.4.3 first paragraph, seventh sentence is changed to read: "More specifically, the data required for workstreams 7, 8 and 9 have a large intersection with a subset of that required for workstreams 4 and 6."
- C.5.4.3 last paragraph, fifth sentence is changed to read: "If the workstreams are targeted for computational platforms not co-located with their current data sources, the Contractor is required to provide any necessary bandwidth, above and beyond the bandwidth provided by the Government, for communication of this data."
- C.5.5 this section contains numerous changes.
- C.5.6.1 this section has been revised throughout.
- C.5.6.2 second bullet, "and for the shipment" added.
- C.5.6.3 Princeton, NJ site the following added to the end of second sentence: "prior to October 2005."
- C.5.6.3 "or NOAA's contractors" has been deleted from the Fairmont, WV paragraph.
- C.6.1.1 this section has been revised throughout.

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Page

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C.6.1.2 – variable "A" in the SLT calculation equation has been changed to read: "Availability" rather than "proposed Availability".

- C.9.5 first sentence changed to read: "The Government requires an option to acquire additional expert-level engineering to address impending needs for a given workstream."
- C.10.3.2.3 Figure 2, Growth in tape-resident files on HSMS in Princeton, and Figure 3, Growth in tape resident storage on HSMS in Princeton, have been revised.
- C.10.4.3.1 changed to read: "NOAA's HPCS in Boulder uses the open source version of Sun Grid Engine (SGE). Currently version 6 is in use on the primary set of clusters. A custom prescheduler is used to manage jobs based upon the account specified by the user. Accounts are given a maximum number of CPUs to be in use at any given point in time, a maximum number of jobs in use at any given point in time, a maximum job length and maximum priority. Certain accounts are also given dedicated resources (**DELETED**). Accounts are members of classes (classes can be members of classes as well), classes have total resource limits as well that the prescheduler takes into account. The qsub command is "wrapped" with a custom script that verifies that the user is a member of the account and hasn't exceeded any of the per-job maximums. The "wrapper" also modifies priority 0 jobs to use an alternate backfill account associated with the primary account. Typically at least 70,000 jobs per week pass through the batch system."

Also, the following has been deleted from the end of the fifth sentence: "(this will be replaced by resource reservations with version 6)."

- C.10.6, Reliability, availability and support, has been deleted. This section discussed the current reliability, availability, and support requirements at Boulder, CO, Washington, DC, and Princeton, NJ. It was determined to be of little, if any, value to the current requirements. This section has been substituted with C.10.6, Data Flows.
- C.11 Appendix B Available Government Facilities numerous changes have been made throughout Appendix B.

SECTION J

J.1, BENCHMARK INSTRUCTIONS, has been revised in its entirety. Section J.1 from the RFP should be removed and replaced with the revised Section J.1 which is attached.

SECTION L

- L.6.1.1 Technical Proposal Organization, Tab 1 PROCUREMENT OBJECTIVES is revised to delete the first three elements. Page L-8 should be removed and replaced with the revised Page L-8.
- L.15 (b)(2) Changed to read: "Subcontracts to Small Disadvantaged Business Concerns". Page L-21 should be removed and replaced with the revised Page L-21.
- 2. This Amendment also responds to vendor's questions received since issuance of the Solicitation. These responses are included as an attachment to this Amendment. NOTE: The questions and answers are also posted to the NOAA R&D HPCS web site at: http://rdhpcs.noaa.gov

If there are any disparity between the questions and answers on the web site and this Amendment, this Amendment shall prevail. Answers to previous questions not provided with this Amendment, and any additional questions received will be responded to in a subsequent Amendment.

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